Paper Number: 4860

Investigation of potential karstic water resources in Shahroud ,Iran using combined Fuzzy-AHP and AHP methods

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Considering Iran's situation in drought risk area, in this study karstic waters are investigated. The study area is located in central of Iran, Semnan Province. Several factors are important in karstification and formation water resources in carbonate, among them important are petrology, topography, climate, geomorphology and hydrogeology are pointed out. In this research, the role of structural factors in the development of karstic water resources in Semnan province has been studied. Firstly, information layers of each factor prepared. For example, tectonic elements, includes maps: lineament density, faults length density, faults intersection density and density distance from faults making use geological maps and processing of satellite images. Information layers analyzed in the geographical information system (GIS), Expert Choice Software making use geostatistical methods. In this study, multi methods like analytic hierarchy process (AHP) & Fuzzy analytic hierarchy process (Fuzzy AHP) are used in study of karstic water resources.